Conservation Activities in West Virginia 2005 Annual Report

Helping People Help the Land

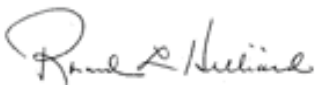
This report gives a highlight of the conservation accomplished in West Virginia in 2005. As always, NRCS accomplishments would not be possible without the conservation-minded farmers and leaders who make wise decisions that protect our natural resources. Conservation on West Virginia's private lands is carried out by only a few, but we all benefit from it economically, socially, and environmentally.

The following are some examples of 2005 achievements that improved water quality, reduced soil erosion, increased wildlife habitat, and improved management of crop and grassland in West Virginia:

- Grazing plans were developed on over 80,800 acres and installed on 48,880 acres of grassland. Nearly 4,360 people participated in 55 grazing land activities including field days, pasture walks, and grazing schools. There were 19 active demonstration projects.
- Watershed technical assistance protected 2.5 million acres and benefited 1.1 million people (63 percent of the State of West Virginia) with flood damage reduction, recreation, and/or water supply.
- Through WHIP, NRCS and USFWS have constructed over 67 miles of fence and protected over 10,000 acres of riparian corridors.
- Wildlife habitat management plans and contracts were completed on 25,741 acres for 140 West Virginia landowners.
- Funding was available for 360 EQIP applications, totaling $5,940,360.
- Through AMA, 22 Sustainable Organic & Truck Crop Farming contracts received $367,054 in financial assistance.
- 109 Manure Transfer-Nutrient Management contracts were funded for $331,809.

- In 2005, West Virginia had 35 counties with soils map data available for the web soil survey. Soils map data is in progress for 20 counties.
- The six West Virginia RC&D Councils completed 137 projects during FY-05. The estimated value of these projects was $2.7 million. 3,015 people developing new skills through workshops and training events.
- In 2005, $1,979,001 in federal FRPP funds were provided to protect 1429 acres of farmland with an easement value of $5.82 million.
- The Plant Materials Center serves Appalachia by evaluating plants for their ability to solve specific conservation problems related to climate, the rugged topography, soil limitations, various land uses, fish and wildlife needs and desires of the landowners.
- Thirty-one sites from the three flood events were repaired— including the removal of flood debris from 1,590 feet of stream channel, stabilization of 4,126 linear feet of streambank, and the revegetation of more than 9 acres of land. As a result of this work, 50 private buildings, 7 public buildings and 6 businesses were protected.
- In 2005, NRCS staff gave brief technical assistance to more than 5,000 West Virginians and more detailed technical assistance to nearly seven times that many people.
- In fiscal year 2005, soils update mapping was completed on over 500,000 acres.

I congratulate West Virginia's farmers, ranchers, and others for being good stewards of the natural resources on their property. I appreciate the excellent assistance provided by NRCS and other conservation partners in making 2005 successful.



Our Employees - Our Strength

NRCS employees serve all 55 West Virginia counties from 31 field offices across the state. Staff includes engineers, conservationists, technicians, soil scientists, RC&D coordinators, and volunteers. These employees work hand-in-hand with land users to

conserve natural resources on private lands.

West Virginia Conservation Partnership

NRCS accomplishes our mission by working closely with West Virginia's 14 Conservation Districts and six Resource Conservation and Development Councils. These locally elected or appointed community leaders ensure that local conservation concerns are met. The WV Conservation Agency and NRCS balance their specific local needs with a coordinated state and national conservation effort.

Conservation Technical Assistance

Conservation planning and application comprises the foundation of the Natural Resources Conservation Services' (NRCS) programs and services. Technical assistance may be provided to landowners whether or not they are enrolled in a USDA conservation program. NRCS promotes planning a total resource management system. This is a sustainable approach taking into account all of the natural resources in the planning area.

Conservation Planning

Conservation planning is the cornerstone of NRCS services. A conservation plan outlines the different practices or measures that a landowner may take to protect the natural resources on his or her property. A plan may address only one natural resource issue, or may be comprehensive, addressing all of the natural resources on the landowner's acreage with several conservation practices.

Conservation Application

Conservation application involves the implementation of the conservation plan. This includes the actual construction of conservation practice or practices recommended by the conservation planner and are typically done by the landowner or a contractor. The conservation application process is complete when all planned conservation practices are implemented.

2004 Farm Bill Financial Assistance in West Virginia Highlights.

Program	Financial Assistance	Contracts	Acres
Environmental Quality Incentives Program (EQIP)	$5,940,310	360	41,556
Agricultural Management Assistance (AMA)	$704,613	132	--
Farm and Ranch Lands Protection Program (FRPP)	$1,979,001	10	1429
Wildlife Habitat Incentives Program (WHIP)	$654,413	140	25,741

	Financial Assistance	Applications Selected	Acres
Grassland Reserve Program	$879,820	5	398

2005 Reports at the following links:

- Agricultural Management Assistance (AMA)
- Conservation Technical Assistance (CTA)
- Environmental Quality Incentives Program (EQIP)
- Emergency Watershed Protection (EWP)
- Farm and Ranch Lands Protection Program (FRPP)
- Private Grazing Land Assistance
- Resource Conservation and Development (RC&D)
- Watershed Protection and Flood Prevention Programs
- Wildlife Habitat Incentives Program (WHIP)
- Soil Survey Program

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Alderson Plant Materials Center (209 KB)

Environmental Quality Incentives Program (EQIP)

Overview

The Environmental Quality Incentives Program (EQIP) provides cost-share to apply structural practices and incentive payments to address natural resource concerns. In addition to financial assistance, this voluntary conservation program also provides technical assistance to farmers.

Contracts are based on conservation plans and may be up to ten years in length to provide a long-term commitment for producers to apply needed practices. The program strives to achieve the most environmental benefits possible.

Local Work Groups, convened by Conservation Districts, provide recommendations to NRCS regarding conservation practices for cost-sharing, cost-share rates, ranking criteria, sign-up periods and other program details. The Local Work Group recommendations are reviewed by the State Technical Committee which provides additional recommendations and advice to the NRCS State Conservationist before final program decisions are made.

2005 Accomplishments

In 2005, West Virginia received 545 applications for EQIP assistance totaling $5,547,826. Funding was available for 360 applications, totaling $5,940,360.

NRCS conservationists developed plans for the following conservation practices:

Practice	Planned Amount
Animal Trails and Walkways applied (feet)	26,853

Composting Facilities (number)	1
Fence (feet)	1,029,782
Heavy Use Area Protection (acres)	24,624
Lined Waterway or Outlet (feet)	420
Livestock Use Area Protection (acres)	106,712
Nutrient Management (acres)	2,841
Pasture and Hay Planting (acres)	4,367
Prescribed Grazing (acres)	44,018
Record Keeping (number)	1,272
Roof Runoff Structure (number)	41
Streambank and Shoreline Protection (feet)	1,040
Livestock Use Exclusion (acres)	49,980
Waste Storage Facility (number)	128
Waste Utilization (acres)	229
Watering Facility (number)	1554

Summary

Program	Financial Assistance	Contracts	Acres
Environmental Quality Incentives Program (EQIP)	$5,940,310	360	41,556

West Virginia's Resource Concern Priorities for EQIP in 2005

Priority Resource Concerns Identified by Local Work Groups

- Quantity and quality of drinking water for Livestock
- Streambank/Roadbank erosion
- Plant Productivity
- Sheet & rill erosion
- Surface water contamination (nutrients and organics)
- Surface water contamination (sediment and suspended solids)
- Plants not suitable for the intended land use
- Poor soil tilth
- Surface water contamination (pathogens)
- Classic gully erosion
- Wildlife Habitat

Additional Resource Concerns identified by the State Technical Committee

- Deficient amounts of soil moisture to sustain plant growth
- Ground water contamination (pesticides)
- Ground water contamination (nutrients and organics)
- Ground water contamination (pathogens)
- Potential objectionable odors from agricultural operations
- Domestic animals–quantity of food or cover for domestic livestock

2005 EQIP success stories:

Success Story	Service Center | RC&D Office	Program
Animal Waste System Installed in Harrison County	Mount Clare Service Center	EQIP
EQIP Improvements Extend Grazing Season	Morgantown Service Center	EQIP
Solving Environmental Concerns Together	Point Pleasant	EQIP

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Agricultural Management Assistance (AMA)

Overview

Agricultural Management Assistance (AMA) provides cost-share assistance to agricultural producers to voluntarily address issues such as water management, water quality, and erosion control by incorporating conservation into their farming operations.

Producers may construct or improve water management structures or irrigation structures; plant trees for windbreaks or to improve water quality; and mitigate risk through production diversification or resource conservation practices, including soil erosion control, or transition to organic farming.

2005 Accomplishments

Activity	Financial Assistance	Contracts
Critical Area Plantings	$5,075	3
Existing Woodland Harvest Road, Trail, & Landing Reclamation	$4,736	2
Sustainable Organic & Truck Crop Farming	$367,054	22
Manure Transfer-Nutrient Management	$331,809	109
	$704,613	132

2005 Success Story

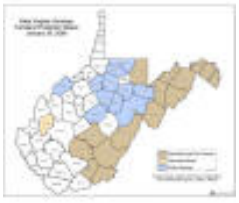
Water Management Produces Healthier Sheep	Petersburg Service Center	CTA, AMA, ECP

Farm and Ranch Lands Protection Program (FRPP)

Overview

Protecting farmland from permanent conversion to non-agricultural land uses in West Virginia is at a critical stage. The state has limited prime farmland acreage and the loss of each acre has a more profound impact upon the rural economy, rural lifestyle, and farm families than in any other state. For this reason the legislature passed the states' Voluntary Farmland Protection Act in 2000 to complement the Federal Farm and Ranchland Protection Program. Counties and the State can cooperate with local land trusts and landowners to purchase voluntarily offered agricultural conservation easements that permanently reserve these lands for farming. In 2002 the NRCS State Conservationist was able to provide $411,900 in Federal Farm and Ranchland Protection Funds to purchase easements on 667 acres of land valued at $838,400. In 2003, $977,536 in federal FRPP funds were provided to protect 1000 acres of farmland with an easement value of $2.23 million. In 2004, $1,574,000 in federal FRPP funds were provided to protect 1489 acres of farmland with an easement value of $3,981 million. Since 2002 landowners in the state submitted over 60 proposals for over $20 million worth of easements through 2005. This level of interest is expected to grow in future years as counties develop their programs and the state program becomes fully operational.

2005 Accomplishments



In 2005, $1,979,001 in federal FRPP funds were provided to protect 1429 acres of farmland with an easement value of $5.82 million. Other related relationships have been formed between the Canaan Valley Institute and the WV Department of Agriculture and the State Farmland Protection Authority to protect watersheds and farmlands through farm and ranchland protection.

Also, partnerships with the WV Land Trust and the Nature Conservancy as well as the

WV Coalition of Land Trusts have led to joint support of farmland protection efforts in the state and the formation of the Association of WV Farmland Protection Programs. See link for more information:http://www.wvfarmlandprotection.org/

NRCS requested Farm and Ranchlands Protection Program Funds for the 2006 Federal fiscal year and has received preliminary allocation of $1.86 million to protect approximately 1600 acres and anticipates requesting $2.5 million for the 2007 Federal Fiscal Year to protect approximately 2500 acres.

Program	Financial Assistance	Contracts	Acres
Farm and Ranch Lands Protection Program (FRPP)	$1,979,001	10	1429

2005 FRPP Success Stories:

Success Story	Service Center | RC&D Office	Program
Protecting Farmland in West Virginia PDF (393 KB)	West Virginia/Mid-Atlantic Highlands	Partnerships for Conservation Action
Keeping their Beloved Farm	Ranson	FRPP

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Wildlife Habitat Incentives Program (WHIP)

Overview

The Wildlife Habitat Incentives Program (WHIP) is a voluntary program administered by the Natural Resources Conservation Service (NRCS) for people who want to develop and improve wildlife habitat on their lands. Through WHIP, both technical and financial assistance are available from NRCS to help establish and improve wildlife habitat.

West Virginia targeted four major habitat types for technical and financial assistance. These habitat types include the development of riparian areas for improved water quality and wildlife habitat; farm wildlife for small game habitat such as cottontail rabbits and native grasslands for songbirds; protection of rare threatened and endangered species such as the federally endangered clubshell mussel; and woodland wildlife species habitat improvements for ruffed grouse and wild turkey.

Conservation practices eligible for WHIP funding include the restoration of grassland habitat in field borders and entire fields; the restoration of riparian areas with trees, shrubs or herbaceous plants; and improvement of woodlands. The use of warm season grasses and native plants are encouraged, as they are more likely to create a higher quality habitat while protecting soil from erosion and improving water quality.

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Applications are evaluated and ranked using statewide criteria. Successful applicants who own or control land agree to prepare and implement a wildlife habitat development plan. This plan describes the landowner's objectives for improving wildlife habitat, a list of practices tailored for the applicant's property that will be installed, detail needed to install them and a schedule for implementation.

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There is no minimum acreage to enroll. The cost-share rate for implementing practices is 75 percent of the total cost of establishment for most practices.

Since the year 2000, the West Virginia WHIP has worked closely with the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program. This partnership enables work crews to build high quality fencing along streams and other sensitive areas, primarily for the establishment of corridors to provide riparian wildlife habitat and improved water quality. Combining these programs enables landowners to have a fence installed at minimal or no cost to the landowner. To date NRCS and USFWS have constructed over 67 miles of fence and protected over 10,000 acres of riparian corridors.

2005 Accomplishments

The Wildlife Habitat Incentives Program received 140 applications for improvements to 25,741 acres of wildlife habitat, requesting an estimated $654,000. Wildlife habitat management plans and contracts were completed on 25,741 acres for 140 landowners, obligating $654,413 for cost-share payments to West Virginia landowners.

In 2003, NRCS has entered into cooperative agreement with the West Virginia Division of Natural Resources to provide technical assistance to landowners to develop individual wildlife management plans through WHIP. This agreement was renewed for 2005.

Program	Financial Assistance	Contracts	Acres
Wildlife Habitat Incentives Program (WHIP)	$654,413	140	25,741

2005 WHIP success stories:

Success Story	Service Center | RC&D Office
Riparian Area Protection Through Cooperation	Weston
Upland Wildlife Development in Barbour County	Philippi Field Office

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Private Grazing Land Assistance

Overview

NRCS and our conservation partners are providing accelerated assistance to increase the quality and quantity of forage production to sustain farms, reduce erosion, and protect water quality. NRCS, in partnership with the West Virginia Conservation Agency, is staffing 14 grassland technicians to provide assistance to farmers statewide. Activities are coordinated through the West Virginia Grazing Lands Steering Committee, in accordance with a strategic plan.

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2005 Accomplishments

In 2005, grazing plans were developed on over 80,800 acres and installed on 48,880 acres of grassland. Nearly 4,360 people participated in 55 grazing land activities including field days, pasture walks, and grazing schools. There were 19 active demonstration projects.

Program	Financial Assistance	Applications Selected	Acres
30 Year Easements	589,820.00	3	268
Permanent Easements	290,000.00	2	130

West Virginia hosted the second Appalachian Grazing Conference—held the first week in March in Morgantown, WV. Over 200 farmers and professionals from eight states attended. Subjects ranged from economics to innovative practices.

The 2005 Grassland Evaluation Contest was held in Jackson's Mill on April 8, 2005 at the Nelson Bean farm in Lewis County. This year's contest, with 18 teams participating (14 were from West Virginia and 4 were from Ohio), was the largest in its five year history. This year's winning team was from Cabell Midland High School. The second place team was Roane County High School and third place team was from Ravenswood.

Special Projects

The Appalachian Small Farmer Pasture-Based Beef Systems Outreach Program is funded through Conservation Operations. This initiative assists West Virginia livestock producers in being economically competitive with the changing market, and to ensures quality of product. Sound economic grazing systems, marketing strategies and uniformity of production quality ensures the competitiveness of livestock operations and help maintain small farm enterprises. This initiative will provide access to the needed one-on-one technical assistance.

The NRCS will continue working cooperatively with ARS Appalachian Soil and Water Research Laboratory and the WV Conservation Partnership. This effort is complimentary to the regional program of WVU, VPI and the Appalachian Soil and Water Research Laboratory for the development of Pasture-based beef systems for Appalachia. This cooperative effort delivers programs and assistance to preserve and enhance rural Appalachian small farm communities.

The critical issues addressed are:

1. Economic viability of small farms
2. Environmental Water Quality

- West Virginia has some of the highest grassland erosion in the United States.

Sediment and nutrients are a water quality concern.

- Many small farmers have feeding areas along streams. Accelerated outreach is needed to continue to provide technical assistance to meet the requirements of the Clean Water Action Plan.
- Continuation and evaluation of riparian grazing and winter-feeding demonstrations.

The WV Grazing Land Steering Committee has developed a strategic plan and is providing leadership for its implementation. NRCS in partnership with the WVCA has staffed 12 grassland technicians to provide assistance to producers statewide.

Grassland work groups are providing direction within the local Conservation Districts. These groups provided $600,000 of state funds to accelerate implementation of proper forage and soil nutrient management on pastureland.

2005 Success Story

Success Story	Service Center | RC&D Office	Program
Harrison County Farmer Installs Rubber Tire Trough	Mount Clare Field Office	CTA-GLC
Turnips and Pasja Extend Grazing Season	Beckley-South Area Office	GLC

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Conservation Technical Assistance (CTA)

Overview

The foundation and history of the Natural Resources Conservation Service (NRCS) is based on helping landowners and land users voluntarily apply conservation on their land.

Technical assistance is simply about helping people. NRCS employees provide conservation options, recommendations, planning or application assistance to individual farmers, local governments and even individual homeowners. Farmers, NRCS's largest customer base, rely on NRCS technical experts to help them apply practices that reduce soil erosion, improve water quality, and enhance forest land, wetlands, grazing lands, and wildlife habitat. The agency also helps individuals and communities restore natural resources after floods, or other natural disasters.

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Helping people make wise land-use decisions about natural resources is the primary function and strength of the organization. The primary delivery system it uses with its

customers is known as “conservation technical assistance.” Technical assistance for natural resource conservation is done through West Virginia’s fourteen Conservation Districts.

2005 Accomplishments

In 2005, NRCS staff gave brief technical assistance to more than 5,000 West Virginians and more detailed technical assistance to nearly seven times that many people. Other accomplishments include:

Conservation System Plans Written, Cropland (Acres)	8,593
Conservation System Plans Written, Grazing Land (Acres)	59,915
Grazing Land, Practices Applied (Acres)	56,965
Forest Stand Improvement (Acres)	2,196
Comprehensive Nutrient Management Plans Written	116

Specific conservation practices planned include:

Brush Management Planned (Acres)	4,065
Conservation Crop Rotation Planned (Acres)	6,828
Fence Planned (Ft.)	543,240
Heavy Use Area Protection Planned (Acres)	5,299
Nutrient Management Planned (Acres)	39,234
Nutrient Management Applied (Acres)	23,740
Stream Habitat Improvement & Management Planned (Acres)	700

Upland Wildlife Habitat Management Planned (Acres)	18,287

Needs Addressed by CTA

Local Conservation Districts identify the resource needs, set local priorities, and develop local plans to address the identified resource concerns. Conservation technical assistance provides:

- Outreach to new and under-served customers.
- Make initial landowner contacts to explain services and program available.
- Assist private landowners to develop voluntary, site specific conservation plans to address resource issues.
- Assist farmers, private land owners, groups, and others to design and implement conservation practices that meet the objectives in their conservation plans, which have not been funded by USDA cost sharing.
- Provide follow-up with landowners after practice installation to ensure proper operation and maintenance.
- Provide technical assistance to Grazing Lands and demonstrate winter grazing and riparian grazing.
- Provide basic soils information to both rural and urban land users.
- Assist Conservation Districts and the WV Conservation Agency with EPA 319 Water Quality Projects.
- Support Conservation Districts conservation education efforts such as Envirothon, land judging, conservation camps, local workshops and tours.
- Help Conservation Districts develop voluntary Farmland Protection Program proposals.
- Assist local Watershed Associations in efforts with stream restoration activities.
- Support Conservation District efforts to address urban and rural non-farm soil erosion, sediment, and storm water management issues.
- Support the Plant Materials Center by doing plant collection evaluations and field trials.
- Follow-up to assure program operation and maintenance.

2005 Success Stories:

Water Management Produces Healthier Sheep	Petersburg Service Center	CTA, AMA, ECP
Harrison County Farmer Installs Rubber Tire Trough	Mount Clare Field Office	CTA-GLC
Buffers Offer Benefits	Romney	CTA, CREP
Dry Fire Hydrants Reduce Insurance Rates	Elkins, Wes-Mon-Ty	CTA, RC&D
Turning To the Sun for the Answer	Wheeling	CTA

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Emergency Watershed Protection (EWP)

Overview

The Emergency Watershed Protection (EWP) Program provides assistance to local citizens, communities, and agencies of local government to restore damaged land and water resources as a result of natural disasters. The most common application in West Virginia is eliminating threats to life and property by clearing blockages from streams and stabilizing critically eroding streambanks following major floods. West Virginia has a high susceptibility to these types of threats due to its steep topography and concentration of housing and other development along streams.

Joint efforts of the West Virginia Conservation Agency, Conservation Districts, and the Natural Resources Conservation Service provide timely response to disasters and efficient use of both state and local resources. The Conservation Partnership can provide both financial and technical assistance in completing these emergency measures.

2005 Accomplishments

In October 2004, EWP funding was appropriated following Hurricane Ivan, the fourth major hurricane during September 2004. This funding was not only to address recovery from flooding resulting from Hurricane Ivan, but also for flooding events occurring around Memorial Day 2004 and during November 2003. Thirty-one sites from the three flood events were repaired during FY2005 at a total cost of $1,276,230. Local sponsoring organization provided $319,057 in matching funds (25%).

Work on the implementation of these recovery measures was completed during the fall of 2005. Projects completed at eligible EWP sites resulted in the removal of flood debris from 1,590 feet of stream channel, stabilization of 4,126 linear feet of streambank, and the revegetation of more than 9 acres of land. As a result of this work, 50 private buildings, 7 public buildings and 6 businesses were protected.

Using federal EWP and matching state funds, the USDA Natural Resources Conservation Service and the WV Conservation Agency removed debris from streams to prevent rebound flooding from new storms. Structural work repaired eroded streambanks and provided protection to property estimated to be worth more than $3.4 million.

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Resource Conservation and Development (RC&D)

Overview

The Resource Conservation and Development program was created so local citizens could develop and carry out an action-oriented plan for the social, economic, and environmental betterment of their communities. The RC&D program was given permanent authorization in the 2002 Farm Bill.

The Natural Resources Conservation Service (NRCS) administers the program and provides a coordinator and administrative support to RC&D councils. West Virginia has six councils that cover all 55 counties. These councils are made up of local citizens, which generally represent counties, cities, and conservation districts. The councils set priorities for the RC&D area.

The six RC&D Areas in West Virginia are:

- Great Kanawha RC&D
- Little Kanawha RC&D
- Mountain RC&D
- Northern Panhandle RC&D
- Potomac Headwaters RC&D
- Wes-Mon-Ty RC&D

2005 Accomplishments

Each RC&D has its own goals, but together the six RC&D Councils completed 137 projects during FY-05. The estimated value of these projects was $2.7 million. Most of the wide variety of projects fit into four categories:

- Land Conservation
- Land Management
- Water Management
- Community Development

Fiscal Year 2005 Accomplishments	Totals
Acres of Wildlife Habitat Improved	207
Acres of Water Bodies Improved	5
Miles of Streams Improved	7
Expanded Businesses	22
Business Financially Assisted	11
People Developing New Skills through Workshops and Training Events	3,015
Workshops and Training Sessions	137
Economically or Socially Disadvantaged People Served	63,590
Citizens Served	871,116

RC&D is a mix of conservation, economic development, environmental enhancement, and community development. The key to success is local leadership. RC&D places heavy emphasis on natural resources. Developing and using human resources is the single most important factor to RC&D success.

2005 Success Stories:

Gilmer County Recreation Area Improvements	Wes-Mon-Ty RC&D Office	RC&D
West Virginia Country Store	Mountain RC&D	RC&D

RC&D Makes a Difference in Paw Paw	Potomac Headwaters RC&D	RC&D
Dominion Day at North Bend State Park	Little Kanawha RC&D	RC&D
Dry Fire Hydrants Offers Protection and Reduces Insurance Premiums	Mountain RC&D	RC&D
Roof Replacement Preserves Community Center	Mountain RC&D	RC&D
Natural Stream Restoration Demonstration Project	Northern Panhandle RC&D	RC&D
Partnerships and Community Workshops	Mountain	RC&D
RC&D Provides Seed Money for Community Center	Wes-Mon-Ty	RC&D

Regional and National

Nationally, West Virginia is recognized as having strong RC&D Councils with a track record of successes. The West Virginia Councils strongly support the national and regional RC&D Associations. A member of the Northern Panhandle RC&D Council, Howard Coffield, currently serves on the board of the National Association of RC&D Councils, and as the President of the Mid-Atlantic RC&D Association.

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Watershed Protection and Flood Prevention Programs (PL-566 and PL-534)

Overview

The purpose of the Watershed Protection and Flood Prevention Programs (PL-566 and PL-534) are to assist State and local governments plan and carry out works of improvement for watershed protection and restoration. They provide for technical and financial assistance by the NRCS to local organizations representing the people living in small watersheds. The PL-534 applies to the Upper Potomac drainage (Grant, Morgan, Mineral, Hardy, Pendleton, and Hampshire Counties), while PL-566 applies to the balance of the State. Resource concerns addressed by these programs include:

- Flooding
- Water supply
- Water quality
- Soil erosion
- Fish and wildlife habitat development
- Water-based recreation

The NRCS provides technical assistance in watershed planning, design, project installation, operation and maintenance of installed measures. NRCS also works with local sponsoring organizations as well as other local, state, and federal entities to obtain all necessary land rights and non-federal matching funds.

These programs match local, state, and federal funds and technical resources to provide a seamless delivery system to local sponsoring organizations. West Virginia places a strong emphasis on developing locally led plans that address all relevant resource issues. The NRCS has assisted local sponsors and watershed organizations

install 168 dams and over 50 miles of stream channel improvement in West Virginia.

Project Benefits

These projects provide the following benefits to West Virginia:

- $34.2 million annually in flood damage reduction
- $19.9 million annually of other benefits (recreation, water supply, etc.)
- 1.1 million people (63 percent of the State of West Virginia) benefited)
- 832,000 recreational visitor days
- 355 bridges and 248 miles of road protected
- 11,800 homes and 926 businesses protected
- 1,800 farms benefited
- 2.5 million acres benefited

The combination of water supply and flood free land can draw new businesses to a community and help broaden and stabilize the economic base. The Mill Creek Project in Jackson County generated $30 million worth of growth.

Aging Dam Maintenance and Rehabilitation

The Aging Dam Maintenance and Rehabilitation Program will enable West Virginia to address rehabilitation concerns impacting some of the 168 dams, constructed with NRCS assistance across West Virginia. Some of these dams are reaching the end of their design life and could pose a threat to public safety. This is becoming a major concern nationwide.

Current Activities

The NRCS is currently providing the following planning assistance to local sponsors:

- Morgan County Water Resources Assessment
- Dunloup Creek Watershed
- Big Sandy Watershed
- Horseshoe Run Natural Stream Restoration Project

- Lost River Watershed (Hardy County)
- Reprioritization of High Hazard Dams for Rehabilitation
- Deckers Creek Watershed Dam Rehabilitation (Preston County)
- New Creek Watershed Dam Rehabilitation (Mineral County)

The NRCS has completed plans for the following projects, which are now in the design phase:

- Upper Deckers Creek Watershed (Monongalia and Preston Counties)
- Little Whitestick Creek Project Phase 3 (Raleigh County)

The following projects are in the construction or implementation phase:

- Upper Tygart Valley Watershed Project (Randolph County)
- North Fork Hughes River Watershed Project (Ritchie County)
- Potomac Headwaters Land Treatment Watershed Project (Hardy, Mineral, Pendleton, Hampshire, and Grant Counties)
- Knapps Creek Natural Stream Restoration Project (Pocahontas County).

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Soil Survey Program

Overview

Soil surveys provide a field-based scientific inventory of soil resources, including soil maps, data about the physical and chemical properties of soils, and information on the potentials and limitations of each soil. Soil surveys have many uses, but are developed to help people make decisions on how to best use the land. These decisions are based on properties and characteristics of the soils, which are published in the soil survey report or as part of a digital database.

2005 Accomplishments

Modern soil survey information is available for the entire state of West Virginia. In fiscal year 2005, update mapping was completed on over 500,000 acres. Our focus is now on updating the soil surveys that were published in the late 1950s and early 1960s. It is important to keep the base imagery, soil physical and chemical properties, and interpretations up-to-date.

Soil Survey Updating in Progress

Soil Survey update project work is underway on private and Federal lands in 7 counties. The updates are conducted when existing soil information is outdated or inadequate to meet current needs. The 7 counties needing updating or maintenance include Marshall, Preston, Tucker, Fayette, Monroe, Raleigh, and Jefferson. The staff is currently working to place all of the official soil survey data on the NRCS website to be accessed electronically.

NRCS works cooperatively with the USDA Forest Service and the West Virginia Conservation Agency to maintain and update soil surveys on Federal and private land in West Virginia.

Soil Survey Digitizing

The digitizing of soil maps and the development of soil survey geographic databases

are an integral part of the soil survey process today. Demand for digital soils data increases each year. This information is utilized in a Geographic Information System (GIS) and is being used more commonly by local units of government as well as by federal and state agencies.

Development of digital soils data is ongoing for all counties in West Virginia. Currently, there are 38 of West Virginia's 55 counties in digital format posted to the NRCS website.

Six full-time employees (four NRCS and two WV Conservation Agency) staff a modern soil survey information center in Summersville WV. They complete digital soil surveys and prepare them for public use.

The Soil Survey Geographic Database (SSURGO) is the most detailed geographic database. Using a digital soils data viewer, Soils Explorer, a user can browse through the digital soils maps and accompanying reference data, selected interpretations, and a photo gallery with pictures of soil profiles, landscapes, and block diagrams.

Digitized Soil Surveys may be downloaded from: http://soildatamart.nrcs.usda.gov

2005 Success Story:

Soil Survey Website Internet-based System	West Virginia Soil Survey

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Year 2005 Progress Report of Activities

Issued April 2006

Alderson, WV Plant Materials Center

P. O. Box 390, Alderson, WV 24910 Web site: Plant-Materials.nrcs.usda.gov

Winter at the Alderson Plant Materials Center

Who We Are

The Alderson Plant Materials Center serves 11 states in the Appalachian Region from Pennsylvania to Georgia and Alabama. The Center is operated by the USDA-NRCS in cooperation with the USDA-Agriculture Research Service, U.S. Forest Service and the Agriculture Experiment Stations of West Virginia University, Virginia Polytechnic Institute and State University and the University of Kentucky. Alderson is located in the heart of Appalachia, and the Center is situated on County Route 3/29, also known as Old Prison Farm Road, approximately 20 miles Southeast of Lewisburg, West Virginia. This center is new with regard to land resource and physical plant, but is the product of the transfer of programs and equipment from Quicksand, Kentucky to Alderson, West Virginia. The transfer of center functions began in 1996 and was completed in 2000.

What We Do

The Plant Materials Center serves Appalachia by evaluating plants for their ability to solve specific conservation problems related to climate, the rugged topography, soil limitations, various land uses, fish and wildlife needs and desires of the landowners. The center provides a place for conducting systematic observations and evaluations of plants needed to protect our natural resources. New techniques are developed for the propagation, establishment, management and use for new or improved species of grasses, legumes, shrubs and trees.

The Center's program emphasizes improving forage production on hillside pastures, address problems associated with concentrated livestock, reclamation of mined lands, streambank stabilization, agro-forestry, wildlife habitat improvement, and utilization of economic and culturally valuable plants. The center assembles plants from the entire service area with similar soils and climate, evaluates the plants, develops management techniques, and provides seed and plants for planting to test performance throughout the area. Most of the plant materials produced at the center are used in West Virginia, Kentucky, Tennessee, Pennsylvania, Ohio, Virginia, and North Carolina.

A brief summary of year 2005 accomplishments follows. For a complete account of all activities, request the 2005 Technical Report at the above address.

2005 Summary of Projects

These projects involve one or more species of native plants and have diversified our partnerships with Native Americans, federal agencies and private conservation groups. A brief description of each project follows.

Ramp, *Allium tricoccum,* Propagation & Cultivation Techniques for the Eastern Band of the Cherokee Nation

The Eastern Band of the Cherokee Nation requested plant materials assistance with development of cultivation techniques for *Allium tricoccum,* or ramps, in 2002. Ramps are one of many native plants that are culturally significant to the Cherokee.

Allium tricoccum is a perennial spring ephemeral that is widely distributed in eastern North America. The southern Appalachians represent the southern edge of its range. Colonies of *A. tricoccum* can be found in cove forests and northern hardwood associations throughout Great Smokey Mountains National Park and adjoining Cherokee Reservation lands.

The Cherokee have traditionally harvested ramps from wild colonies on reservation and park land by digging and removing the entire plant in early spring. The harvesting of ramps has been allowed in Great Smokey Mountains National Park since the establishment of the park. National Park Service policy states that the Park Superintendent may designate certain fruits, berries, nuts, etc. that may be gathered by hand for personal use or consumption provided a written determination indicates that gathering or will not adversely affect the reproductive potential of the plant. However, the National Park Service has become concerned that ramps are being over harvested in the Park. This concern has been heightened with the increasing popularity of ramp festivals, which require large quantities of ramps. Recent Park Service field reports indicate that accessible ramp populations are smaller and less dense than those found in more remote areas of the Park.

Allium tricoccum

In an effort to be proactive, the Cherokee have opted to move from traditional spring ramp gathering from wild populations to establishment and management of "backyard" ramp gardens for their people. The Alderson Plant Materials Center will assist the Cherokee to bring this culturally significant wild plant into cultivation. The goal is to develop a dependable supply of ramps for the Cherokee, while limiting further depletion of the wild population within the Great Smokey Mountains National Park.

In November of 2002, staff from the Plant Materials Center harvested a quantity of dormant ramp bulbs from Cherokee reservation lands in North Carolina. These bulbs were transplanted into a forested area at the Plant Materials Center and monitored throughout 2003 for survival. Survival and growth of the transplants was excellent, but there was no seed production in 2003 and 2004. Approximately 6 grams of seed was harvested in 2005. This seed will be conditioned and planted in the greenhouse in 2006.

U. S. Department of the Interior-National Park Service Stones River National Battlefield Native Plant Restoration

Stones River National Battlefield, located in Middle Tennessee on the northwestern edge of Murfreesboro is the site of one of the significant battles of the War Between the States. The Battle of Stones River, fought between December 31, 1862 and January 2, 1863 marked the beginning of the Union Army's "March to the Sea" which resulted in Union control of agricultural land and supply networks and prevented further attempts by the

Confederate Army to push northward. Stones River National Battlefield was established in 1927 to preserve this significant historic site. The original property consisted of 344 of the 4,000 acres over which the battle was fought. The park currently encompasses approximately 700 acres.

Vegetation and terrain played an important role in the outcome of the Battle of Stones River. Because of the incidence of limestone outcroppings, cedar brakes and cedar woods dominated the majority of the original park property at the time of the battle. It is suspected that these areas were used as hog lots circa 1862. The cedar glades in the area, which were and are characterized by shallow soil and exposed limestone bedrock, lacked sufficient vegetation for forage or cover for livestock and likely, were considered wastelands.

During the battle, the rock outcrops and thick cedar woods significantly slowed troop progress and impeded rapid movement of artillery pieces. However, the significance of the battlefield's vegetation lies not only in its historical significance but also in its botanical and ecological value. The site is host to a number of rare and endemic plant species and unique plant communities.

Today, introduced and exotic plant species have encroached onto many areas of the battlefield. Park managers have identified restoration of native plant communities as a high priority for maintenance of the park's circa 1862 authenticity. National Park Service personnel have completed a thorough assessment of the vascular flora inhabiting the battlefield property and have targeted approximately twenty native plant species having high priority for use in restoration of plant communities.

The Alderson Plant Materials Center has agreed to work with the National Park Service at Stones River National Battlefield to collect seed, develop propagation techniques, and produce seedling plants and/or seed of the targeted species for plant community restoration within the park. This project is expected to have at least five years duration.

Calendar year 2003 was the initiation year for this agreement. During 2003, NRCS personnel traveled

Transplanting Plugs at Stones River National Battlefield

to Stones River National Battlefield to become familiar with the park's ecological communities, identify prime seed collection locations for the nineteen species of interest, and to assess appropriate seed collection techniques and optimum harvest times. Several late summer seed collection trips netted small (less than 0.5 pounds) quantities of seeds from thirteen species. All seed was collected by hand stripping methods. The thirteen species represented in the 2003 seed harvest are: *Andropogon virginicus, Andropogon ternarius, Andropogon gyrans, Chasmanthium latifolium, Dichanthelium* spp., *Eragrostis spectabilis, Leersia virginica, Schizachyrium scoparium, Asclepias tuberosa, Symphyotrichum drummondii, Lespedeza violacea, Lespedeza hirta,* and *Rudbeckia triloba.* All seed harvested was transported to the Alderson, West Virginia Plant Materials Center, where it was conditioned and placed in appropriate seed storage until planting in fiscal year 2004.

In 2004, the Alderson Plant Materials Center produced approximately 20,000 seedlings from the 2003 seed harvest. The seedlings were mechanically transplanted into tilled fields at Stones River National Battlefield to establish seed production fields. Natural Resources staff at Stones River National Battlefield will harvest and use seed from these fields to restore and maintain this historic site's circa 1862 floristic authenticity.

Seed collection and conditioning and transplant production continued in 2005. The PMC produced a

total of about 26,000 transplants representing 10 plus native species. The majority of the transplants were shipped to Stones River National Battlefield for establishment of seed production fields. Transplants retained by the PMC are to be used to establish small seed production blocks at the PMC in the event of field failures at Murfreesboro.

US Army Corps. of Engineers – Marmet Native Plant Mitigation

The Alderson Plant Materials Center continued to assist the US Army Corps. of Engineers - Huntington District with restoration of native plants at the Marmet Locks and Dam Project. This project is located on the Kanawha River in West Virginia upstream of Charleston. The project includes building a new lock chamber and approach channels at River Mile 67.7. All vegetation and habitats within the approximately 150 acre site will be destroyed during the course of construction.

Six native woody species were harvested from the site prior to the start of construction. These species are: *Acer saccharinum,* silver maple; *Lindera benzoin,* spicebush: *Sambucus canadensis,* elderberry; *Asimina triloba,* pawpaw; *Sassafras albidum,* sassafras; and *Aesculus octandra,* yellow buckeye. These plants are being maintained as container grown stock at the Plant Materials Center until completion of construction, when they will be re-introduced to the Marmet site to assist with re-establishment of genetic diversity at the lock and dam location. In the autumn of 2005, 128 pawpaws, 104 elderberries, 10 sassafras, 100 spice bushes and 38 silver maples were returned to the construction site for transplanting into areas where earth moving activities have been completed. Plants remaining at the PMC continue to be maintained as container stock pending construction completion circa 2008.

Saving West Virginia's Balsam Fir

Abies balsamea, balsam fir is native to high elevation areas in West Virginia. However, balsam fir numbers are declining due to a serious infestation of the balsam wooly adelgid. The adelgid is an exotic, sap-sucking insect that causes mortality within 2-3 years of initial contact. Several conservation groups have recognized the rapid decline of the fir in West Virginia and have formed a partnership with the US Department of the Interior and the Plant Materials Center to restore balsam fir to four natural areas in the West Virginia Highlands. Volunteers from the West Virginia Highlands Conservancy, The Mountain Institute, The Nature Conservancy, and others harvested balsam fir seed from four locations in the West Virginia Highlands in the fall of 2000. The harvested seed was processed by the volunteers and shipped to Alderson PMC for seed banking. The PMC is also responsible for producing seedlings for reintroduction to the natural areas where the seed was harvested.

Abies balsamea seedling production at Alderson Plant Materials Center

During 2003, staff at the Alderson Plant Materials Center germinated a small lot of seed from each of the four collection locations. While actual germination percentages were low, 20-35 percent, for all lots, several hundred seedlings were produced. These seedlings will be maintained at the Plant Materials Center until they are large enough to be re-introduced into their native habitat. The seedlings from 2003 were maintained at the PMC during 2004 and additional small quantities of seed from each collection were germinated in 2004, with the 2004 germination percentages being similar to 2003 percentages. Approximately 400 seedlings were returned to the Canaan Valley Wildlife Refuge in 2005. The PMC will continue to maintain the remaining seedlings until they are reintroduced into their native habitat.

Giant Cane Rapid Propagation Study

Arundinaria gigantea, giant cane or bamboo is our largest native grass. Giant cane covered extensive

areas of the southeastern United States at the time of European settlement. These areas were known as canebrakes and they disappeared rapidly following settlement due to a combination of factors. Today, giant cane persists largely as an understory plant in other vegetative cover types.

The shoots or canes arise from underground stems known as rhizomes. Only rarely does *Arundinaria* flower and set seed. Historical accounts of cane brakes clearly indicate that when *Arundinaria* flowers and produces seed, the plant then dies. Thus the principal method of reproduction is vegetative.

The NRCS has developed an interest in rapidly propagating giant cane for use as a streambank erosion control plant and other conservation uses. Collection of plants from Illinois, Indiana and Ohio were initiated in 2001. The Alderson PMC received plants from 9 different locations. These plants will be evaluated with regard to survival, rate of spread, and ability to produce new plants from division of rhizomes.

Arundinaria gigantea stand near Malden, WV

The Eastern Band of the Cherokee Nation also has an interest in Giant cane. However, their interest is in those cane plants that produce large diameter canes. Cherokee crafters use the large diameter canes to make traditional basketry. Suitable canes have become very difficult to harvest from wild cane populations, and the Cherokee are interested in propagating plants that are suitable for their basketry. The Alderson PMC will assist the Cherokee with development of propagation and management techniques to ensure their crafters have a dependable supply of large diameter cane plants.

In 2004, the Alderson Plant Materials Center continued to maintain and observe the 9 collections from Illinois, Indiana and Ohio. Collections of giant cane from the remainder of the Center service area continue to be sought, especially from stands that are producing larger diameter canes.

Two collections from West Virginia were added to the *Arundinaria* observation block in 2005. An *Arundinaria* plant establishment study was also initiated in 2005 using the eleven accessions currently maintained at the PMC. The PMC will continue working with giant cane in 2006.

‘Quickstand’ Bermudagrass Forage Production Demonstration Project

‘Quickstand’ bermudagrass is a commercially available bermudagrass that was selected by the Plant Materials Center for use as forage and turf. Coastal type bermudagrasses are routinely used in the Southern states as a warm season summer forages. However, Coastal bermudagrasses are not adapted to the colder, continental climate found in the Appalachian region. ‘Quickstand’ bermudagrass was discovered at the former location of the Plant Materials Center in Quicksand, Kentucky and found to be well adapted to the Appalachian region. In fact, this cultivar has proven to be incredibly cold hardy. It not only survives, but thrives at 3000 feet in elevation in West Virginia! However, like most bermudagrasses, ‘Quickstand’ does not produce viable seed. Thus, new stands must be established by transplanting live plants through a process called “sprigging”.

Interest in use of bermudagrass as forage to alleviate the “mid-summer slump” has increased dramatically within the Center’s service area recently. This increase may be attributed to articles that have been published in popular trade magazines, such as the Stockman Grass Farmer, and also through programs such as the Grazing Land Conservation Initiative. Establishment of bermudagrass through transplanting or sprigging is an intensive process that requires specialized equipment which is not readily available in the Center’s service area. Unavailability of establishment equipment was a detriment to use of bermudagrass by many forage producers.

The Plant Materials Center recognized that equipment unavailability was a problem with use bermudagrass as forage and in late 2002 purchased a no-till sprig planter for use in establishing demonstration plantings. This planter was used to establish bermudagrass for forage in Maryland, West Virginia and Tennessee in 2003, 2004 and 2005. Demonstration plantings included 'Quickstand' and 'World Feeder' cultivars. The PMC no-till sprig planter and 'Quickstand' sprigs will continue to be available for demonstration plantings.

Plant Materials Center's No-till Bermudagrass Sprig Planter

Central Appalachian White Clover Germplasm Characterization Study

The Plant Materials Center is cooperating with Dr. Paul Voigt, retired Agricultural Research Service clover breeder, to provide white clover base populations that could be used in future cultivar germplasm development projects. To obtain white clover germplasm with good adaptation to central Appalachian pastures, Dr. Voigt made collections from well managed pastures located in Kentucky, Ohio, West Virginia, and Virginia. Twelve white clover experimental populations and cultivars have been planted in an observation block at the Plant Materials Center. Data collection began in 2003, and is expected to continue through at least 2005.

Central Appalachian White Clover Observation Block

Data being collected includes leaf size, foliage height, stolon spread, stolon density, flower density, and pest damage.

In 2004, Dr. Voigt was able to determine that three of the Central Appalachian White Clover populations deserve consideration for germplasm preservation and possible release. These populations all exhibit good adaptation to Central Appalachian environments and presumably to Appalachian pastures. Two other Central Appalachian White Clover populations were not included in this study. They were planted in a new study established in 2004. Data collection on the study established in 2004 continued throughout 2005. One or more white clover germplasm releases are anticipated circa 2008.

Annual Land Judging Competition Held at the Plant Materials Center

The Plant Materials Center was the host location for the Southern and Greenbrier Soil Conservation District sponsored Regional Land Judging competition again in 2005. This marks the sixth year that the PMC has hosted this annual competition.

Regional Land Judging Competition Scene

Competitors are normally Future Farmer of America and Canon Envirothon students from middle and high schools from the seven counties comprising the two soil conservation districts. Students and coaches are given a brief tour of the center after they have completed their judging. The Plant Materials Center looks forward to hosting this competition in future years.

West Virginia National Guard Camp Dawson Agreement Initiated

During 2004, the Natural Resources Staff at Camp Dawson, the Army National Guard Training Camp near Kingwood, West Virginia, entered into an agreement with the Alderson PMC. The purpose of this agreement is for the PMC to produce local ecotype warm season grass seed for the Camp Dawson Natural Resources Staff to use in revegetating areas disturbed by annual training activities. Much of the training conducted at the camp involves earthmoving equipment, which inevitably leaves a lot of bare ground to be revegetated! Previous revegetation efforts have focused almost exclusively on use of introduced grasses and/or legumes which have often proven to be less than satisfactory aesthetic, wildlife and erosion control values. It is the desire of the Camp's Natural Resource Staff to increase use of locally adapted warm season grasses to improve the aesthetic, wildlife, and erosion control values of their revegetation efforts.

Four warm season species are indigenous to the Camp. These species are: *Sorgastrum nutans,* Indiangrass; *Andropogon gerardii,* big bluestem; *Schizachyrium scoparium,* little bluestem; and *Panicum virgatum,* switchgrass. Seed from each of these species was collected at Camp Dawson in 2004 and 2005.These seeds were conditioned at the PMC and will be planted to establish seed production blocks at the PMC in 2006. Seed harvested from the PMC production fields will be returned to Camp Dawson to be used in revegetating areas disturbed by troop training exercises. All four species will also be evaluated at the PMC as potential Central Appalachian ecotype releases for use as forage and wildlife values.

Native Plants for Kentucky Food Security Act Programs

The Kentucky Plant Materials Committee is going native! FSA contracts benefiting wildlife are abundant in Kentucky, while locally adapted native plants to use in these contracts are not. The Kentucky Plant Materials Committee approached the PMC for assistance with this dilemma in 2004. As a result, the PMC will be doing initial seed increase for five native species in 2005. These species are: *Liatris spicata,* Spiked Blazing Star; *Rudbeckia hirta,* Black-eyed Susan; *Desmanthus illinoensis;* Illinois bundleflower; *Lespedeza capitata,* Roundhead lespedeza; and *Lespedeza virginicus,* Virginia lespedeza. Seed produced by the PMC will be provided to Kentucky seed producers who will establish production fields and market seed of these species in Kentucky. All of these species are potential Kentucky ecotype releases.

Seedlings of each Kentucky ecotype were started in 2.25 inch diameter plug cells in 2005. These plugs will be transplanted into field production blocks in 2006.

Forest Service Red Spruce Propagation Agreement

As a part of the Early Bird Timber Sale Area Improvement Plan, the Forest Service plans to plant approximately 20 *Picea rubens,* red spruce, seedlings per acre in the upper portions of the sale area in order to accelerate restoration of the Red Spruce Montane Forest Ecosystem. This will increase the habitat suitability for the endangered Northern flying squirrel within the sale area, and possibly provide additional squirrel habitat.

However, locally adapted red spruce seedlings are not available commercially. Thus, the purpose of this agreement is for the Forest Service and the PMC to work cooperatively to produce local ecotype red spruce seedlings at the PMC from seed gathered collected within the Marlinton District of the Monongahela National Forest. The Forest Service and the PMC may also consider jointly releasing this red spruce ecotype for commercial seedling and/or seed production and sale.

Approximately 1000 red spruce seedlings are being maintained in a container nursery at the PMC until their reintroduction into the West Virginia Red Spruce Montane Forest Ecosystem in 2006.

Canaan Valley Wildlife Refuge Ecotype Speckled Alder Project

Canaan Valley National Wildlife Refuge, the nation's 500th, is located near Davis, WV at an altitude of approximately 3500 feet. The combination of altitude, wet soils, forests, shrub lands, and open expanses create a sub alpine landscape and provide a diversity of wildlife habitats. While not as readily visible as other birds, woodcock contribute to the diversity of avian species that inhabit the refuge.

USF&WS personnel at Canaan Valley Wildlife Refuge have secured funding for habitat enhancement projects within the refuge, with a primary focus on woodcock habitat. Personnel have also harvested seed from locally available *Alnus incana ssp. rugosa*, speckled alder, plants for use in producing seedlings for habitat restoration and enhancement within the refuge. However, USF&WS lack the personnel, facilities and expertise to produce seedlings for their woodcock habitat restoration and enhancement project.

Thus, US F &WS personnel opted to solicit PMC assistance with production of the speckled alder seedlings. The PMC agreed to produce approximately 1000 seedlings for the Canaan Valley Wildlife Refuge woodcock habitat enhancement program and proceeded to plant the speckled alder seeds provided by the US F&WS in the autumn of 2005. This project is expected to continue through 2008.

Publication and Presentation Activities for 2005

During 2005, the Alderson PMC either authored or assisted with authoring several papers principally pertaining to native plant related issues. Native plant diversity in a West Virginia riverine floristic community and native plant restoration at Stones River National Battlefield were topics of poster papers published at the Fourth Eastern Native Grass Symposium. Native plant restoration at Stones River National Battlefield was also the topic of a poster paper published at the George Wright Society Conference. Other publications included the 2005 West Virginia Grassland Planner and the Greenbrier Valley Master Beef Producers Manual.

Oral presentations on native plant restoration at Stones River National Battlefield were given at the George Wright Society Conference held in Philadelphia, PA and at the Native Plant Restoration Workshop for National Park Service Managers held at Manassas National Battlefield in Manassas, VA. Other presentations included a summary of *Arundinaria* propagation investigations at the Alderson PMC presented at the Second Cane Convening held in Cherokee, NC and a general discussion of the benefits of using native grasses in WV pastures presented at a Grassland Specialists Workshop held in Morgantown, WV.

In summary, the PMC published a total of 9 articles and made 8 presentations in 2005.